

## Claim 16

The mesh generation method according to claim 14, wherein said step of extracting said characteristic may include the steps of:

calculating not only the sizes of said elements of said conventional mesh, but also, for each of said elements, the direction of flow, and the size and the aspect ratio of an ellipse or of an ellipsoid, which are defined based on said elements; and

employing said direction of flow, and said size and said aspect ratio of said ellipse or said ellipsoid to calculate a field describing said characteristic of said conventional mesh and corresponding to the overall conventional mesh.

## Claim 17

The mesh generation method according to claim 14, wherein said step of extracting said characteristic includes the steps of:

calculating an inertia tensor for each of said elements of said conventional mesh;

calculating a tensor field, based on said inertia tensor obtained for each of said elements, for said overall conventional mesh; and

extrapolating said obtained tensor field, so that for mesh generation said tensor field matches said shape model.

## Claim 18

The mesh generation method according to claim 14, wherein said step of extracting said characteristic includes the steps of:

calculating an inertia tensor for each of said elements of said conventional mesh; and

employing said inertia tensor for each of said elements to directly calculate a tensor field that is extrapolated for the entire shape model.

Claim 19

A storage medium wherein input means of a computer stores a computer-readable program, which permits said computer to perform:

a process for extracting from a predetermined mesh a characteristic that matches the purpose of finite element analysis; and

a process for generating for a predetermined shape model a mesh based on the characteristic extracted from said predetermined mesh.

Claim 20

The storage medium according to claim 19, wherein said program also permits said computer to perform:

a process for calculating a tensor field defined based on said elements of said predetermined mesh in order to extract said characteristic.

Claim 21

A program transmission apparatus comprising:

storage means, for storing a program that permits a computer to perform

a process for extracting from a predetermined mesh a characteristic that matches the purpose of finite element analysis, and

a process for generating for a predetermined

shape model a mesh based on the characteristic extracted from said predetermined mesh; and

transmission means, for reading said program from said storage means and transmitting said program.

Claim 22

The program transmission apparatus according to claim 21, wherein said program also permits said computer to perform:

a process for calculating a tensor field defined based on said elements of said predetermined mesh in order to extract said characteristic.